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IMPROVED PASTURES CUT PRODUCTION COSTS

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A radio discussion by C. R. Enlow, Bureau of Plant Industry, D. A. T. Semple, Bureau of Animal Industry, W. J. Roth, Bureau of Agricultural Economics, T. E. Woodward, Bureau of Dairy Industry, and Morse Salisbury, Chief of Radio Service, delivered in the Department of Agriculture period of the National Farm and Home Hour, Monday, January 16, 1933, broadcast by a network of 48 associate NBC radio stations.

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SALISBURY:

Reports from different sections of the country mention interest in the improvement of old pastures and in making new pastures this year. The demand for information on pastures has brought about the appointment of a committee of four Department of Agriculture men to collect and make available business and scientific knowledge about pastures. Today, these four men have met before the Farm and Home Hour microphones to give you some of the important general facts. First, let me present W. J. Roth of the farm management division. Roth, there's speculation, as you know as to whether this is a good time, with prices of cash crops very low, to improve old pastures or make new ones. What about pastures as a practical part of the farm business?

ROTH:

Well, pastures represent an interesting part of the farm business and a part that's easy to neglect. Pastures can add to the farm income under several conditions. For instance, on a farm containing soil not fitted for field crops and, let us say, still too good for woods, obviously, pasture offers the best opportunity to use the land. Then, other farmers find that they can increase their farm income by putting part of the possible crop land into pasture of the semi-permanent or rotation type.

SALISBURY:

Well, do you mean that you would recommend increasing pastures at this time?

ROTH:

Yes -- and -- no. I have no doubt some men may profit by giving more land to pasture. It will add to their income by maintaining fertility, improving yields of following crops, adding to the livestock feeds, and reducing the farm operating expenses. Pastures fit mighty well into a long time farming program on many farms. On the other hand, some men can make but little use of pastures. Their farms may be of the type that we call cash crop producing. Again, in these times when a man watches every penny of cash expense, some men may not be able to buy the grass seed even at present low prices. However, my own feeling is that every man, no matter how much or how little pasture he now has, will do well to consider his situation not only at present, but in the long run. Let me suggest, Salisbury, that these other members of the pasture committee give the facts they have gathered about establishing and improving and using pastures.

(over)

SALISBURY:

Very well. Woodward, how about the pasture situation for dairymen? You all know T. E. Woodward, the man in charge of the dairy management investigations of the Department. He has talked with the Farm and Home Hour audience a number of times.

WOODWARD:

Yes, and I've heard from a number of Farm and Home listeners. Now, I should say that dairymen, especially in the Northeast and the Southeast, are especially interested because better pastures produce milk at lower costs. A number of experiments and surveys have established the facts. For instance, one survey was made in six New York counties to gather figures on the cost of feeding dairy cows. The men who made the survey issued figures showing average daily expense for feed while cows were on pasture, of a little less than ten cents, while the cost of the feed purchased or raised for the cows when they were not on pasture, 38 cents per cow. Of course, the amounts spent for feed are smaller now, because the prices of feed have come down since this survey was made, but the fact remains that good pastures cut down the amount of cash expense the Northeastern and Southeastern dairymen incur for feed.

SALISBURY:

I understand you also have found that pasture grass is higher in feeding value than hay.

WOODWARD:

Yes, that's true -- that is, young and succulent grass is much more nutritious than hay. We have been running some experiments at the government dairy farm near Washington on this point. As compared with hay, we've found that young grass is more digestible and contains more protein and vitamins. The minerals are also more completely assimilated. For these reasons pastures are particularly valuable to enable cows to replenish any stores of minerals or vitamins that may have become depleted during the winter feeding period. Pasture grass or at least green feed of some kind is almost essential to the continued well-being of dairy cows.

SALISBURY:

Now, Semple, will you take the microphone and tell about some of the results of pasture experiments in the production of meat animals? Farm and Home listeners, this is another one of the men who have talked with us from time to time in these programs, A. T. Semple, of the animal husbandry division.

SEMPLER:

At the government animal husbandry farm near Washington, in each of the past four years, we grazed yearling steers, one head per acre, for an average of 140 days during each season. Their average gain on pasture was 208 pounds.

Say you put a value of six cents a pound on the gain, it shows a tidy profit -- in the neighborhood of \$8.25 per acre, above the cost of the seed and fertilizers used and interest on the investment in land, fences and cattle.

The Mississippi and Indiana Experiment Stations have recently completed tests in which they produced lambs on pasture alone that were more profitable and just about equal to lambs grown on pasture with a grain supplement. And of course everyone knows of the many experiments showing the value of pastures of alfalfa and other forage plants for hog production.

SALISBURY:

Now, Enlow, the farm management man and the dairyman, and the animal husbandman have had their say about the pasture situation this year. Do you have anything to add about the place of pastures in farm operation generally? Farm and Home listeners, Agronomist C. R. Enlow, in charge of Northern pasture investigations for the Bureau of Plant Industry.

ENLOW:

I'm glad to talk with you folks about pastures. Now I think we should add one fact to what Woodward and Semple have very briefly said about the feeding value of pasture, and what Roth has said about its function as a raiser of farm income. I remind you that pastures protect land from erosion and also help keep up the store of plant food in the soil. Bennett and other speakers have kept you fully informed as to the results of experiments showing the value of pastures in checking erosion, so I won't repeat.

SALISBURY:

Well, then, Enlow, suppose you give us in outline the general methods of improving present pastures, and starting new pastures.

ENLOW:

Now that is quite a large order, Salisbury. I think we ought to take it in broken doses. First I'd like to divide the part of country covered by this Farm and Home Hour audience into at least two sections, the Northeastern States and the Corn Belt in one section, and the Southeastern States and the Cotton Belt in another.

SALISBURY:

That means you won't deal with the pasturage problem in the Great Plains section, then, Enlow.

ENLOW:

Not today. That is such a special problem.

SALISBURY:

All right, now the facts about pastures in the Northeastern States and the Corn Belt.

ENLOW:

All I can give you is general principles of course. Let me say right at the start that you can get most valuable information on pasture improvement from your county agricultural agent and your State experiment station. I doubt if they will advise you to reseed old pasture -- unless the land has a very poor stand of grass -- and also unless you can use a disc to work in lime, phosphate, and manure.

SALISBURY:

They found it better to bring back a fair old stand by other methods than reseeding?

ENLOW:

That's right. If a pasture has a fair stand of grass it's remarkable how quickly application of the right fertilizer will thicken the stand and bring up the production.

SALISBURY:

You speak of the right kind of fertilizer. What might that be?

ENLOW:

Well, of course, that depends upon the soil of the pasture. Generally pasture land in the Eastern States lacks phosphorus and nitrogen. Superphosphates or some other form of readily available phosphate gives increased growth and invariably increases the percentage of white clover. Probably no other fertilizer will give the economic return that phosphate will on most Eastern soils.

SALISBURY:

You spoke of nitrogen too.

ENLOW:

Nitrogen is undoubtedly of much value for increasing pasture production, whether you apply it in the form of barnyard manure or commercial fertilizer. But remember that applying nitrogen in the northern states simply increases spring and fall production and does not add materially to production during the normally dry weather of midsummer. At that time, it is usually the lack of moisture, not the lack of plant food that limits growth. In the southeastern states, where rainfall is heavy in midsummer, production/greatest at that time.

SALISBURY:

So the thing to do in fertilizing pastures is first to find out what elements of fertility the soil lacks, I take it?

ENLOW:

ENLOW:

Yes. That of course is the wise thing to do. Again I may say, call on that man of all work, the county agricultural agent, for information.

SALISBURY:

Now how about weed control to improve pasture?

ENLOW:

Well, if you keep up the fertility of the soil, and if you don't overgraze, the pasture plants will keep the weeds down pretty well. But if the pasture is run down, you can help the grass to overcome some kinds of weeds by mowing at the right time. Generally a plant contains the least amount of starch at the blooming period. If you cut the plant at that period, it is likely to die or make much weaker growth, than if you cut it at some other period. Experiments in Kansas have shown that the most effective time to mow buckbrush and sumac is May 10th to June 10th. On the other hand, results of experiments in Connecticut indicate that there July is apparently the best time for mowing to kill goldenrod, ferns, cinquefoil, blackberries, blueberries, and tree sprouts or seedlings. Persistent cutting in midsummer and late summer near the time of bloom will finally kill off woody shrubs.

SALISBURY:

Now while we're on this matter of improving pasture, will you give us the method shown best by experiments in the Southeastern States and the Cotton Belt?

ENLOW:

Yes. In the Southeast and the Cotton Belt, the general principles of improving old pastures are the same as in the Northeast and the Corn Belt — fertilizing, and killing the weeds. In the Southeast, as in the North, pasture soils are most often deficient in phosphorus, so phosphates usually give good results. Lime, of course, will help bring up the fertility of pastures on the sour soils. A complete fertilizer containing nitrogen, phosphorus and potash probably ranks next to phosphates in point of usefulness for Southern pastures.

Now just a few brief comments about the weed problem in Southern pastures. Here again, if the fertility is high, the pasture plants will grow vigorously enough to smother the weeds. It helps to mow at the time when the weeds are just beginning to bloom. But mowing will not help so much in killing out the weeds that grow from creeping stems or roots -- weeds like the Canada thistle, Hawkweed and spreading dogbane. If you find patches of these weeds just starting, kill them out with chemicals. Your county agent will give you directions.

Let me add that the most inexpensive method of keeping down weeds and woody shrubs is to graze the pasture periodically with sheep or goats.

SALISBURY:

Now, Enlow, will you give us some facts about varieties of pasture plants and methods of starting permanent pastures in the Northeast and the Corn Belt?

ENLOW:

Again let me say that you have to choose the pasture plants that fit with the soil and climate of your locality. But generally speaking, the list of pasture plants best adapted in the Northeastern States will run as follows:

Kentucky bluegrass and white clover on fertile soils.
Redtop and alsike clover on poorly drained soils.
Reed canary grass on wet soils.
Canada bluegrass on infertile, droughty soils.
Orchard grass in dry or shady areas.
The bent grasses on acid soils of low fertility.

I don't think I need to advance the familiar reasons for planting a mixture of grasses and legumes rather than one single variety. Nor will I take up your time by reviewing all the many methods of establishing a permanent pasture. Again, your county agent can give you specific information.

SALISBURY:

Now about supplies of grass seeds and legumes for planting pastures this spring?

ENLOW:

Reports of the seedsmen indicate that there are unusually large supplies of Kentucky bluegrass and Redtop. The others are in ample supply also,

SALISBURY:

Now for establishing pastures in the South.

ENLOW:

Well, in the South too, mixtures of grasses and legumes make better pastures than pure stands of either. The three most valuable tame grasses for improved pastures in the Cotton Belt are Bermuda grass, carpet grass, and Dallis grass. The legumes available and most useful are lespedeza, white clover, hop clover, black medic, and bur clover. From your local agricultural authorities you can get exact information of the combinations best adapted to your soils.

Now as to methods of seeding. Results in the Gulf States have uniformly been better where there has been some cultivation of the soil previous to seeding. On the rolling lands of the Gulf Coast regions, terracing methods developed at our experiment station at McNeil, Mississippi, cost no more than ordinary methods and make it easier to get a stand of pasture plants and also to keep a good stand. Pastures seeded on terraced land have been better than pastures seeded on unterraced land.

SALISBURY:

Now you spoke of the usual midsummer period in the North when lack of water held down the productiveness of pastures. There are similar periods in the South, of course?

ENLOW:

Yes. Southern grasses make excellent growth in the hot weather if moisture is plentiful, and produce less in spring and fall. For instance, Bermuda grass usually is most productive in June, July and August. And dies down at the first light frost in the fall.

SALISBURY:

So in both North and South, a man with livestock can make use of supplemental pastures to lengthen the grazing season?

ENLOW:

Yes, of supplemental pastures, and also of pasture mixtures which includes plants producing their greatest growth at different seasons.

SALISBURY:

Thanks, Mr. Enlow, and Mr. Sample, and Mr. Woodward, and Mr. Roth, for your concise information on this timely matter of improving present pastures and providing more pastures where possible and practicable.

